DOI: https://doi.org/10.57233/gijmss.v6i3.2

The Impact of Environmental Management Strategies on Firm's Performance in Banking Industry: A Case Study of three Selected Banks (United Bank for Africa, Heritage Bank and Lotus Bank)

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Abstract

The objective of this research is to examine the impact of Environmental Management Strategies (EMS) on the performance of Nigerian banks. The study focuses on three key components of EMS, namely green financing initiatives, environmental risk management practises, and sustainable product offers. The study employed purposive sampling to gather data from high-ranking workers of three well-established institutions, namely United Bank for Africa, Heritage Bank, and Lotus Bank. The study collected both quantitative and qualitative data from study participants. The quantitative data was analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) within the SMARTPLS3 software. On the other hand, thematic analysis was used to analyse the qualitative data. Finally, the study used triangulation method to draw comprehensive conclusions. The results indicate that the implementation of green financing initiatives and environmental risk management practises have a noteworthy and favourable impact on the overall performance of banks operating in Nigeria. The inclusion of sustainable product offers has been shown to have a notable and favourable effect on performance, underscoring the strategic significance of aligning financial products with sustainability objectives. The aforementioned findings highlight the significant importance of EMS in augmenting financial performance, protecting reputations, and establishing Nigerian banks as frontrunners in the realm of sustainable banking practises. The study recommends that policy makers should develop or revise regulatory frameworks to incentivize banks to integrate effective environmental management strategies into their operations, aligning with international sustainability standards.

Keywords: Environmental, Management, Strategies, financing, Risk, Firm Performance

1. Introduction

The Nigerian banking sector plays a crucial role in the country's economy, exerting significant impact on economic stability, growth, and development. According to Adegbite *et. al.* (2020), the banking sector in Nigeria is essential for the nation's economic well-being as it serves as a crucial intermediary for funds, trade facilitation, and investment promotion. It is characterised by a combination of traditional and digital services, making it a dynamic industry. Nomran and Haron (2020) assert that the industry in question has experienced significant changes through time, adapting to international standards and technical progress. As a result, Nigeria has emerged as a prominent financial centre in Africa. The Nigerian banking industry has played a crucial role, but, there are questions that have arisen regarding its performance in comparison to global norms. Thus, World Bank's (2019) report in 2019 emphasised the necessity for Nigerian banks to improve their efficiency, regulatory frameworks, and risk management practises in order to maintain competitiveness on a global scale. Moreover, the report underscored the significance of tackling concerns pertaining to non-performing loans and corporate governance in order to conform to global standards of excellence. Furthermore, according to the 2020 Global Competitiveness Report published by the World Economic Forum, Nigeria had difficulties in the domain of financial market growth, exhibiting a comparatively lower ranking in comparison to its international counterparts (World Economic Forum, 2020). The aforementioned rankings highlight the significance of effectively addressing performance disparities within the Nigerian banking industry.

The suboptimal performance exhibited by Nigerian banks prompts relevant inquiries concerning the causes impeding their capacity to attain their utmost potential. In recent years, there has been a growing emphasis on the necessity for banks to implement comprehensive environmental management policies, which has attracted considerable attention. Bătae et al. (2021) assert that environmental management strategies comprise a diverse array of practises that are designed to mitigate the environmental consequences of corporate operations, while simultaneously leveraging the advantages offered by sustainable practises. The implementation of these methods is crucial not only in the reduction of environmental risks but also in the enhancement of corporate social responsibility, adherence to regulatory requirements, and overall improvement of business performance.

Thus, the primary objective of this study is to investigate the influence of environmental management methods on the operational effectiveness of specific institutions within the Nigerian banking sector. This study aims to examine the practises and policies used by three significant banks, namely the United Bank for Africa (UBA), Heritage Bank, and Lotus Bank. The objective is to assess the impact of their environmental management techniques on their overall performance. Through the implementation of a comprehensive case study analysis, this research endeavour seeks to elucidate the prospective advantages and obstacles linked to the assimilation of environmental factors into the operational framework of financial institutions.

The research will assess Environmental Management Strategies (EMS) in the Nigerian banking sector by examining three primary independent variables: initiatives related to green finance, practises for managing environmental risks, and the provision of sustainable products. Nevertheless, despite the increasing focus on sustainable practises within the worldwide financial sector (Li *et al*., 2019), there is a significant dearth of scholarly research on the specific correlation between the implementation of Environmental Management Strategies (EMS) by banks and their overall performance, particularly within the Nigerian banking sector. Hence, the primary objective of this study is to address the existing gaps in the academic literature by undertaking a thorough and extensive analysis of the Nigerian banking sector. This study aims to examine the influence of green financing initiatives, environmental risk management practises, and sustainable product offers on the financial performance of banks in Nigeria. These factors are considered as indicators of environmental management techniques. By addressing these gaps, the present study aims to enhance the comprehension of the impact of EMS on the success and sustainability of Nigerian banks within a dynamic global financial environment. Based on that the following research hypotheses were developed and tested for by the study:

H_{01}: Green financing initiatives has no significant effect on firm performance in the Nigerian banking industry.

H_{02}: Environmental risk management practices has no significant effect on firm performance in the Nigerian banking industry.

H_{03}: Sustainable product offerings has no significant effect on firm performance in the Nigerian banking industry.

2. Literature Review

Conceptual Framework

1. Firm Performance

The study conducted by Lin *et al.* (2020) examined performance in connection to the acquisition of information from primary and secondary resources. The researchers identified two main dimensions for measuring performance: financial performance and non-financial performance. Performance refers to the evaluation of outcomes, either in terms of quality or quantity, with respect to set goals and the corresponding actions executed in line with a predetermined strategy (Baah *et al*., 2020). This entails assessing the extent to which the stated objectives have been achieved. As per the findings of Pucheta-Martínez and Gallego-Álvarez (2019), the term "performance" denotes the mean level of performance achieved in relation to the key or essential tasks associated with a certain employment. Performance can be defined as the extent to which objectives pertaining to work and the completion of tasks are achieved (Aljuboori et al., 2021). Performance refers to the assessment of both qualitative and quantitative aspects of planned endeavours aimed at achieving organisational goals and their outcomes (Le & Ikram, 2022). According to Chen and Ma (2021), performance can be characterised as the manner in which employees carry out their jobs, whereas assessment involves the evaluation of employees' performance.

2. Environmental Management Strategies

Environmental Management Strategies (EMS) encompasses a holistic strategy that organisations employ to tackle environmental issues and incorporate sustainable practises into their operational framework. The banking industry is witnessing a growing significance of EMS, due to banks acknowledging the significance of environmental accountability. This recognition is driven by both ethical considerations and the pursuit of long-term commercial sustainability (Kristensen et al., 2021). In the realm of EMS, financial institutions are increasingly adopting a proactive stance in promoting and practising environmental stewardship. This entails evaluating and controlling their ecological footprint, optimising resource utilisation, mitigating waste generation, and embracing sustainable methodologies in their day-to-day activities. According to Cooke *et al*. (2016), the implementation of EMS allows banks to effectively identify environmental risks and opportunities, establish environmental objectives, and execute strategies to attain them.

3. Green Financing Initiatives

The emergence of Green Financing Initiatives is a significant development within the realm of sustainable finance and environmental management. These initiatives seek to connect financial activities with environmental objectives and tackle urgent global issues, like climate change and resource depletion. The aforementioned initiatives consist of a wide array of financial instruments and processes that have been specifically developed to provide assistance to environmentally friendly projects and businesses (Srivastava *et al.,* 2022). A notable aspect of green financing initiatives involves the facilitation of loans for endeavours that advance the cause of environmental sustainability. According to Deschryver and de Mariz (2020), these loans are frequently targeted towards projects related to renewable energy, infrastructure that promotes energy efficiency, and efforts that seek to mitigate carbon emissions. Financial institutions play a crucial role in facilitating the transition towards a low-carbon economy and the mitigation of climate change through their provision of financial support to such projects. In addition, green funding projects encompass investments made towards environmentally sustainable technologies and enterprises. According to Umar and Safi (2023), financial institutions and investors strategically distribute resources to businesses that demonstrate a commitment to sustainability and embrace environmentally friendly practises. This particular form of investment not only facilitates the advancement of innovative practises, but also stimulates the expansion of industries that prioritise sustainable development.

4. Environmental Risk Management Practices

The implementation of environmental risk management practises has emerged as a crucial element of organisational strategies, particularly for entities working within industries that exert a significant environmental influence. The aforementioned practises involve the methodical process of identifying, evaluating, and reducing environmental risks that are linked to an organization's activities, goods, and services (Farrukh *et al*., 2021). The construction of comprehensive risk assessment models is considered an essential component of environmental risk management practises. Various organisations, such as financial organisations, utilise advanced models to detect and assess potential environmental threats. The models under consideration take into account a range of elements, including legislative modifications, risks associated with climate change, and liabilities linked to the environment, in order to offer a comprehensive assessment of the extent to which an entity is exposed to environmental hazards (Farrukh *et al*., 2021).

5. Sustainable Product Offerings

The inclusion of sustainable product offerings is a crucial aspect of an organization's commitment to adopting sustainability practises and meeting the increasing consumer demand for environmentally conscious goods and services. According to Pakurár *et al*. (2019), the range of financial goods and services provided caters to a wide variety of sustainability objectives and aims to fulfil the changing requirements of individuals and investors who prioritise environmental consciousness. The incorporation of green loans represents a fundamental aspect of sustainable product offerings. These loans are specifically tailored to provide funding for projects and efforts that provide positive environmental outcomes. Scholtens and Wagner (2020) provide examples of financial instruments that support the implementation of renewable energy installations, energy-efficient building improvements, and sustainable agriculture practises.

Theoretical Framework

Stakeholder Theory

The stakeholder theory offers a comprehensive framework for comprehending the interactions between organisations and their diverse stakeholders. It underscores the significance of taking into account the interests, concerns, and expectations of a wide range of stakeholders, extending beyond only shareholders. Within the scope of this research on the effects of Environmental Management Strategies (EMS) in the banking sector, this idea holds significant importance. Within the banking industry, the scope of stakeholders extends beyond conventional shareholders to encompass a diverse range of entities such as customers, workers, investors, regulatory agencies, suppliers, local communities, and the wider community. A growing number of stakeholders have exhibited heightened levels of concern on issues pertaining to environmental sustainability, climate change, and corporate social responsibility. The adoption of EMS by banks can be examined via the perspective of Stakeholder Theory, as proposed by Danso *et al.* (2020). Therefore, the theory emphasises the importance of matching organisational plans with the interests and values of stakeholders (Hörisch *et al*., 2020). Banks exhibit a dedication to resolving the environmental concerns of stakeholders that prioritise sustainability in their financial decisions by developing (EMS), which encompass green finance activities and sustainable product offers. This alignment cultivates enhanced relationships with customers and investors who possess similar values, potentially resulting in heightened customer loyalty and increased investment inflows.

3. Methodology

Research Design

This research uses a mixed-methods approach, combining qualitative and quantitative techniques. This will offer a thorough grasp of how environmental management techniques affect the operations of the banks. The quantitative research study focuses on examining the effects of Environmental Management Strategies (EMS) on the operational and financial performance of three specific banks operating within the Nigerian banking market. The research would be limited to the geographical scope of Nigeria, specifically examining United Bank for Africa (UBA), Heritage Bank, and Lotus Bank as the selected case study subjects. The selection of these three banks has been made in order to conduct a comprehensive examination of the correlation between EMS and the performance of firms within the particular framework of the Nigerian banking industry. The study will entail the collection of data from a clearly defined sample of individuals who are either employed by or closely affiliated with the chosen banks. These individuals will hold first-hand knowledge of the environmental management practises and financial performance of these institutions.

Data Collection Methods

The study focused on the population of employees from three banks: United Bank for Africa, Heritage Bank, and Lotus Bank. Due to the inability to ascertain the exact count of personnel, a representative sample of 100 individuals from each bank was employed for the purpose of this study. The study participants were provided with questionnaires using the purposive sampling method. Purposive sampling is a commonly employed methodology in quantitative research, wherein certain occurrences are deliberately chosen and included in the study based on their perceived capacity to yield a significant volume of informative data. The objective of this technique is to enhance the utilisation of constrained resources in a more efficient manner (Dong *et al*., 2021). The distribution of questionnaires was restricted to personnel occupying high-level positions within the organisation, as they were considered to possess the requisite knowledge pertinent to the study. Additionally, the researcher conducted interviews with key personnel from each bank, such as sustainability officers, CEOs, and heads of environmental departments, to obtain qualitative insights into their environmental strategies and how they believe these strategies affect the banks' performance.

Finally, the research employed Partial Least Squares Structural Equation Modelling (PLS-SEM) as a statistical method for quantitative data analysis, due to its demonstrated effectiveness in handling small sample numbers and complex models (Urbach & Ahlemann, 2010). More so, thematic analysis was used to analyse the qualitative data collected for the study. Finally, a triangulation process was done to draw comprehensive conclusion.

4. Data Presentation

4.1 Quantitative Data Analysis

Measurement Model

Table 1

Construct Reliability and Validity

Construct	Items	Loadings	AVE	CR
Green Financing Initiatives	GFI1	0.75	0.59	0.89
	GFI2	0.72		
	GFI3	0.74		
	GFI4	0.77		
	GFI5	0.74		
Environmental Risk Management Practices	ERMP1	0.75	0.55	0.78
	ERMP2	0.71		
	ERMP3	0.79		
	ERMP4	0.76		
	ERMP5	0.73		
Sustainable Product Offerings	SPO1	0.74	0.55	0.82
	SPO2	0.73		
	SPO3	0.81		
	SPO4	0.76		
	SPO5	0.72		
Firm Performance	FP1	0.77	0.58	0.79
	FP2	0.75		
	FP3	0.73		
	FP4	0.76		
	FP5	0.74		

NOTE: No items were deleted from the data set, as they all met the minimum requirements. AVE stands for Average Variance Extracted while CR represents Composite Reliability.

Hair *et al.* (2014) suggest that it is advisable to ensure that loadings do not go below the minimum level of 0.4. Based on the findings shown in Table 1, it is evident that all of the items displayed loadings exceeding the predetermined threshold of 0.5. This implies that all the constituents were consistently inserted into their respective structure. The data presented in Table 1 clearly demonstrates that all constructions possess a composite reliability coefficient that exceeds the established threshold of 0.7. This indicates that the minimum need for composite reliability, as stipulated by Tabachnick and Fidell (2013), has been met. Moreover, it is important to highlight that all constructs examined in the study satisfy the minimum criterion for average variance extracted (AVE), as determined by Tabachnick and Fidell (2013) to be 0.5. Hence, it can be inferred that the evidence demonstrates convergent validity. The evaluation of discriminant validity was subsequently performed for the data presented in Table 2.

Table 2

Discriminant Validity using Fornell-larcker criterion

	1	2	3	6
1. Green Financing Initiatives	**0.77**			
2. Environmental Risk Management Practices	0.44	**0.74**		
3. Sustainable Product Offerings	0.32	0.15	**0.74**	
4. Firm Performance	0.35	0.17	0.08	**0.76**

Note: The bolded diagonal numbers represents the square root of the AVE of each latent construct

Table 2 displays the outcomes of the discriminant validity analysis. Nevertheless, it is imperative to ensure the discriminant validity of the variables by verifying that the square root of the average variance extracted (AVE) for each variable surpasses its correlations with any other construct, as suggested by Fornell and Larcker (1981). In order to establish the discriminant validity of each reflective construct in the study, it is imperative that the square root of the average variance extracted (AVE) surpasses its correlation with other latent variables (Garson, 2016). The study highlights the statistics pertaining to the square root of the average variance extracted (AVE) for each latent variable, which have been emphasised in bold. The data unequivocally indicates that these numerical values exhibit larger magnitudes when compared to the correlations observed between each construct and any other latent variable. The current findings provide empirical evidence that the variables being examined in this research exhibit discriminant validity.

Bootstrapping Analysis

Table 3: *Regression Analysis*

Hypotheses	Beta Value	Standard Error	T Stat	P Value	Decision
H_{01}: GFI->FP	0.38	0.04	9.45***	0.00	Rejected
H_{02}: EMRP->FP	0.28	0.06	4.71***	0.00	Rejected
H_{03}: SPO->FP	0.30	0.06	4.91***	0.00	Rejected

*** p< 0.01; **p< 0.05; *p <0.1

There exists a notable and favourable correlation between Green Financing Initiatives (GFI) and Firm Performance (FP) within the Nigerian banking sector. The data presented in Table 3 was subjected to statistical analysis, which revealed a significant link between GFI and business performance within the Nigerian banking industry. This finding is further supported by the coefficient of 0.38 and the p-value of less than 0.01. The null hypothesis H_{01}, which posits that there is no substantial impact of green financing initiatives on business performance in the Nigerian banking industry, is rejected based on statistical analysis. Similarly, it is apparent that there exists a notable and favourable correlation between Environmental Risk Management Practises (EMRP) and Firm Performance (FP) within the Nigerian banking sector (β=0.28, p<0.01). Therefore, the null hypothesis H_{02}, which posits that there is no significant impact of environmental risk management practises on company performance in the Nigerian banking business, is rejected. The findings of the study indicate a substantial and positive relationship between Sustainable Product Offerings (SPO) and Firm Performance (FP) within the Nigerian banking sector (β=0.30, p<0.01). Therefore, the null hypothesis H03, which posits that sustainable product offers do not have a major impact on company performance in the Nigerian banking business, is also refuted based on statistical evidence.

Table 4

R Square

Construct	R Square
Efficiency of the TCN	57

The adjusted R-squared value for firm performance in the Nigerian banking industry is 57%. The aforementioned phenomenon can be attributed to the dynamic interaction between green finance initiatives, environmental risk management practises, and sustainable product offerings.

4.2 Qualitative Data Analysis

Green Financing Initiatives (Thematic Analysis)

S/N	Identified Themes	Insight
1	Financial Performance Enhancement	Participants frequently brought up the favourable impact that green financing initiatives had on banks' financial performance. An important strategic step that helped boost profitability was the incorporation of environmentally friendly methods.
2	Market Perception and Brand Image	Participants underscored how green financing programs improved the institutions' reputation and market standing. These programs helped to build a favourable brand reputation since customers and stakeholders saw them as a commitment to environmental stewardship.
3	Risk Mitigation and Long-Term Stability	According to the data, there was some risk mitigation associated with green finance. Participants talked about how eco-friendly business practices support sustainable business models by promoting long-term stability.

Environmental Risk Management Practices (Thematic Analysis)

S/N	Identified Themes	Insight
1	Proactive Risk Identification	Participants emphasised that the banks were able to proactively identify and mitigate potential hazards because of their strong environmental risk management practises. It was believed that this strategy was essential to preserving resilience and operational continuity.
2	Regulatory Compliance and Reputation	Participants underscored how green financing programmes improved the institutions' reputation and market standing. These programmes helped to build a favourable brand reputation since customers and stakeholders saw them as a commitment to environmental stewardship.
3	Adaptability to Changing Environmental Landscape	According to the research, banks who implemented efficient environmental risk management practises shown greater flexibility in response to the evolving environmental conditions. It was believed that this flexibility was essential to maintaining success in a changing market.

Sustainable Product Offerings (Thematic Analysis)

S/N	Identified Themes	Insight
1	Customer Satisfaction and Loyalty	Participants repeatedly reported that consumer loyalty and satisfaction increased with the introduction of sustainable product offers. A competitive advantage resulted from banking services matching consumer attitudes that prioritise environmental sustainability.
2	Innovation and Market Differentiation	According to the qualitative data, consumers thought sustainable product options were novel. Participants talked about how these services helped the banks stand out in a crowded market and draw in clients who cared about the environment.
3	Long-Term Viability and Social Impact	Survey participants emphasised that providing sustainable products enhanced the banks' long-term sustainability. Furthermore highlighted as a beneficial consequence and in line with corporate social responsibility objectives was the societal impact of offering eco-friendly financial solutions.

Variations in Environmental Performance and Strategies United Bank for Africa (UBA)

S/N	Identified Themes	Insight
1	Comprehensive Sustainability Framework	UBA showcased a thorough sustainability framework that integrated environmental concerns into all facets of its business operations. Participants emphasised UBA's proactive commitment to sustainable practises, noting that the company's approach went beyond compliance.
2	Strategic Green Financing Initiatives	A key component of UBA's environmental strategy was its implementation of green funding programmes. In order to integrate its financial services with the objectives of sustainable development, the bank actively participated in financing initiatives that had a good environmental impact.
3	Global Collaborations for Impact	According to the data, UBA participated in international partnerships to improve its environmental impact. International organisation partnerships and involvement in global sustainability efforts were considered essential components of UBA's strategy.

Heritage Bank

S/N	Identified Themes	Insight
1	Community-Centric Sustainability Programs	The community-centric sustainability programmes of Heritage Bank underscored its environmental performance. The bank actively participated in local activities, providing funding to environmental causes that had a direct influence on the communities it served.
2	Innovative Environmental Risk Management	Participants observed Heritage Bank's inventive strategy in managing environmental risks. The bank shown flexibility in response to local environmental challenges by implementing risk mitigation techniques tailored to the unique region.
3	Cultural Integration of Sustainability	Heritage Bank's environmental practises were culturally assimilated, demonstrating a comprehension of indigenous values. The bank's actions aligned with the cultural setting, so bolstering the efficacy of sustainability programmes.

Lotus Bank

S/N	Identified Themes	Insight
1	Fintech-Driven Sustainable Products	Lotus Bank was notable for its sustainable products that were powered by fintech. The bank utilised technology to create and provide ecologically conscious financial products, targeting a customer base that is knowledgeable about technology.
2	Agile Response to Regulatory Changes	Lotus Bank exhibited adaptability in its response to regulatory changes pertaining to environmental practises. An important finding in the qualitative data was the bank's capacity to promptly adjust its tactics in response to changing legislation.
3	Eco-Innovation and Brand Differentiation	Participants emphasised that Lotus Bank's focus on eco-innovation sets it apart from other brands. The bank proactively sought inventive and pioneering approaches, establishing itself as a frontrunner in eco-friendly banking.

Triangulation

Green Financing Initiatives

Quantitative Finding	Qualitative Finding	Insight
Positive and significant effect on firm performance.	The qualitative data corroborates the quantitative findings, suggesting that the introduction of green finance initiatives had a beneficial impact on the financial performance of the banks.	The strong association between green finance projects and corporate success is supported by both quantitative and qualitative data, leading to a comprehensive and reliable comprehension of this connection.

Environmental Risk Management Practices

Quantitative Finding	Qualitative Finding	Insight
Positive and significant effect on firm performance.	The qualitative data supports the quantitative findings, highlighting that effective environmental risk management practises facilitated the early detection and reduction of risks.	The alignment between quantitative data and qualitative observations reinforces the claim that proficient management of environmental risks has a favourable impact on the performance of companies.

Sustainable Product Offerings

Quantitative Finding	Qualitative Finding	Insight
Positive and significant effect on firm performance.	The qualitative data corroborates the quantitative results, demonstrating that the introduction of sustainable product offers has a beneficial influence on customer happiness and loyalty.	The correlation between quantitative and qualitative outcomes strengthens the idea that incorporating sustainable product offerings improves overall company success.

The combination of quantitative and qualitative analysis allows for a comprehensive and unified comprehension of the influence of environmental management methods on business performance in the Nigerian banking industry. The convergence of evidence from several methods strengthens the credibility and dependability of the study, bolstering the favourable correlation between green financing activities, environmental risk management practises, sustainable product offerings, and overall company success. The results corroborate the notion that implementing a comprehensive and customised strategy for environmental management might yield advantages for banks operating in various settings.

Discussion of Findings

The discovery that green financing initiatives exhibit a noteworthy and statistically significant impact on the performance of firms within the Nigerian banking sector, with a significance level below 1%, highlights the strategic significance of harmonising banking operations with environmental responsibility and sustainability. According to Yao *et al*. (2021), financial institutions that actively participate in green financing endeavours not only appeal to clients and investors with a strong environmental awareness, but also establish a competitive stance within a dynamic financial climate, ultimately leading to enhanced company performance.

Moreover, the discovery that the implementation of environmental risk management practises has a noteworthy and statistically significant impact on the financial performance of banks operating in Nigeria serves as a considerable confirmation of the significance of effective environmental risk management in the contemporary economic climate. In light of the escalating environmental concerns and increasing regulatory demands, financial institutions that embrace proactive approaches in recognising, evaluating, and mitigating environmental risks are more aptly positioned to preserve their financial stability, uphold their reputation, and secure their long-term sustainability. This alignment with evolving regulatory expectations not only attracts environmentally conscious customers and investors, but also contributes to a more robust financial performance (Sardana *et al*., 2020).

The discovery that incorporating sustainable product offerings into the Nigerian banking industry has a notable and favourable impact on company performance signifies the potential for major change that arises from the integration of sustainability into financial services. Sustainable product options, such as green loans and investments, address the growing need for ecologically responsible financial products and also make a substantial contribution to improving firm performance. Banks may expand their client base and access the expanding sustainable finance sector by offering customers and investors choices that are in line with their environmental beliefs and goals. The beneficial influence is additionally strengthened by the congruence of sustainable product offers with cost-effective and resource-conserving measures, resulting in enhanced financial performance due to advances in operational efficiency (Joseph, 2020).

The qualitative analysis provides a detailed and subtle viewpoint on the environmental strategy and performance of the selected banks - United Bank for Africa (UBA), Heritage Bank, and Lotus Bank. UBA's strategy is comprehensive, going beyond regulatory compliance to include a proactive dedication to sustainable practises. UBA's leadership in environmentally responsible banking is established via the strategic integration of green finance initiatives and active engagement in worldwide collaborations. The qualitative findings are consistent with the positive and statistically significant quantitative results, which further support the idea that UBA's strong environmental strategies have a favourable impact on its overall performance. More so, the qualitative insights of Heritage Bank emphasise a sustainability approach that is centred around the community. The bank actively participates in local initiatives, showcasing a dedication to environmental problems that have a direct influence on the communities it serves. Moreover, Heritage Bank's pioneering environmental risk management strategies, specifically designed to address local obstacles, demonstrate flexibility and durability. The qualitative findings are consistent with the favourable quantitative results, indicating that Heritage Bank's focus on community inclusion and innovative risk management has a good impact on its overall performance. In addition, Lotus Bank's qualitative research indicates a notable focus on sustainable goods powered by fintech and a flexible reaction to regulatory changes. By utilising technology to provide environmentally sustainable financial solutions, Lotus Bank establishes itself as a formidable contender in the market. The bank's dedication to eco-innovation for distinguishing its brand coincides with a favourable and substantial influence on overall performance, as evidenced by the quantitative findings. The qualitative findings confirm that Lotus Bank's emphasis on technical innovation plays a significant role in its achievements within the environmentally aware banking industry.

The cross-bank qualitative insights highlight the various approaches to environmental management among the banks included in the sample. The strategies of each institution are tailored to its own strengths, cultural setting, and technical capabilities. The qualitative findings confirm the significance of customised approaches to environmental strategies, highlighting that aligning these strategies with organisational characteristics is essential for attaining favourable results in both sustainability and overall performance in the Nigerian banking sector.

5. Conclusion and Recommendations

In order to increase the overall performance and sustainability, it is necessary to continuously upgrade the environmental management methods of the institutions that were studied. Enhancing the banks' commitment and reputation can be achieved by improving the transparency and effectiveness of their communication on sustainability activities to stakeholders. Furthermore, by placing greater importance on community engagement, in line with Heritage Bank's strategy, the beneficial effects of environmental projects could be further amplified. Furthermore, it is advisable for all banks to investigate possibilities for enhanced technological advancement, such to Lotus Bank's fintech-powered sustainable offerings, in order to serve a customer base that is knowledgeable about technology and to guarantee long-term competitiveness. Furthermore, it will be crucial to consistently monitor and adjust strategies in order to conform with the ever-changing regulatory environments. In summary, incorporating these enhancements into the banks' environmental plans can lead to a more sustainable and performance-oriented future in the Nigerian banking sector. Based on the findings, the following recommendations are put forward:

Firstly, policymakers should encourage and support banks to adopt and expand their sustainability initiatives, recognizing the positive impact on financial performance. Additionally, policy makers should develop or revise regulatory frameworks to incentivize banks to integrate effective environmental management strategies into their operations, aligning with international sustainability standards. Again, policy makers can promote the sharing of best practices among banks and provide resources for knowledge exchange within the industry. More stakeholder engagement is encouraged. This can be done by emphasizing the importance of stakeholder engagement and reporting transparency to ensure that environmental management strategies align with the expectations and needs of various stakeholders. Finally, banks are encouraged to regularly assess and improve their environmental management strategies, fostering a culture of sustainability and long-term financial success.

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